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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/617,832   | 07/14/2003  | Soo-Chang Choi       | 3887-0141P          | 5218             |
| 2292   | 7590        | 05/13/2004           |                     |                  |
| BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      |                     | EXAMINER         |
|  |             |                      |                     | LAM, TUAN THIEU  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2816                |                  |

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |               |                 |           |
|------------------------------|---------------|-----------------|-----------|
| <b>Office Action Summary</b> | Applicant No. | Applicant(s)    |           |
|                              | 10/617,832    | CHOI, SOO-CHANG |           |
|                              | Examiner      | Art Unit        | <i>AN</i> |
|                              | Tuan T. Lam   | 2816            |           |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 08 January 2004.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1 and 5-7 is/are rejected.

7) Claim(s) 2-4 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)<br>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)<br>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/14/2003</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date _____<br>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)<br>6) <input type="checkbox"/> Other: _____ |
|---|---|

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, the recitation of "the latching unit" in lines 1-2 is indefinite because it is unclear as to if this latching unit refers to the latching unit recited in line 18 of claim 1 or of the latching unit (line 3 of claim 2) of the tracking/latching unit. Clarification is required.

In claim 6, the recitation "to connect or disconnect between the latching unit in response to the clock signal" is indefinite because it is unclear what is being connected or disconnected from the latching unit in response to the clock signal. Clarification is required.

In claim 7, the recitation of "the latch means" in line 6 lacks proper antecedent basis.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Michalski (US2004/0027265). Figure 1 of Michalski shows a comparator comprising a differential input unit (25) inputting two analog input signals (Sin), a tracking/latching unit (30, 50-55), performing a tracking and latching operation through receiving a differential output of the differential input unit from an ordinary sub input terminal (collectors of transistors 31, 32), and having different current pass from each of the ordinary /sub input terminal of the tracking/latching unit itself in order to make the tracking/latching unit itself operated as a load of the differential input unit for a tracking operation in the track mode, a latching unit (38) for latching an outputting an output of the tracking/latching unit as called for in claim 1.

Regarding claim 6, the switching unit is seen as the switch 42 of Michalski.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's cited prior art figure 2. Figure 2 of applicant's cited prior art shows a comparator comprising a differential input unit (10) inputting two analog input signals (Vin1, Vin2), a tracking/latching unit (MN3, MN4, MN5), performing a tracking and latching operation through receiving a differential output of the differential input unit from an ordinary sub input terminal (drains of transistors MN4, MN5), and having different current pass from each of the ordinary /sub input terminal of the tracking/latching unit itself in order to make the tracking/latching unit itself operated as a load (MN3 is a load and further shown in figure 3) of the differential input unit for a tracking operation in the track mode, a latching unit (11) for latching an outputting an output of the tracking/latching unit as called for in claim 1.

Regarding claims 6 and 7, the switching unit is seen as the transistors MN1 and MN2.

***Allowable Subject Matter***

6. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claim 5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In this regard, applicant's cited prior art has been carefully considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam  
Primary Examiner  
Art Unit 2816